

Welcome to STN International \* \* \* \* \*

<u>NEWS</u>	<u>1</u>	Web Page URLs for STN Seminar Schedule - N. America
<u>NEWS</u>	<u>2</u>	"Ask CAS" for self-help around the clock
<u>NEWS</u>	<u>3</u>	CA/Cplus records now contain indexing from 1907 to the present
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<u>NEWS</u>	<u>8</u>	AUG 18 FROSTI and KOSMET enhanced with Simultaneous Left and Right Truncation
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<u>NEWS</u>	<u>10</u>	SEP 22 DIPPR file reloaded
<u>NEWS</u>	<u>11</u>	DEC 08 INPADOC: Legal Status data reloaded
<u>NEWS</u>	<u>12</u>	SEP 29 DISSABS now available on STN
<u>NEWS</u>	<u>13</u>	OCT 10 PCTFULL: Two new display fields added
<u>NEWS</u>	<u>14</u>	OCT 21 BIOSIS file reloaded and enhanced
<u>NEWS</u>	<u>15</u>	OCT 28 BIOSIS file segment of TOXCENTER reloaded and enhanced
<u>NEWS</u>	<u>16</u>	NOV 24 MSDS-CCOHS file reloaded
<u>NEWS</u>	<u>17</u>	DEC 08 CABA reloaded with left truncation
<u>NEWS</u>	<u>18</u>	DEC 08 IMS file names changed

NEWS EXPRESS NOVEMBER 14 CURRENT WINDOWS VERSION IS V6.01c, CURRENT MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP), AND CURRENT DISCOVER FILE IS DATED 23 SEPTEMBER 2003

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FILE NUMBER ENTERED AT 08:04:58 ON 09 DEC 2003

SINCE FILE ENTRY	TOTAL SESSION
0.21	0.21

FILE 'CAPLUS' ENTERED AT 08:05:08 ON 09 DEC 2003  
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FILE COVERS 1907 - 9 Dec 2003 VOL 139 ISS 24  
 FILE LAST UPDATED: 8 Dec 2003 (20031208/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s coal and polysaccharide  
 205824 COAL  
 35049 COALS  
 207632 COAL  
 (COAL OR COALS)  
 50709 POLYSACCHARIDE  
 62370 POLYSACCHARIDES  
 79139 POLYSACCHARIDE  
 (POLYSACCHARIDE OR POLYSACCHARIDES)  
 L1 147 COAL AND POLYSACCHARIDE

=> s polysaccharide (P) resin  
 9 POLYSACCHARIDE  
 10 POLYSACCARIDES  
 19 POLYSACCHARIDE  
 (POLYSACCHARIDE OR POLYSACCARIDES)  
 524474 RESIN  
 356724 RESINS  
 646434 RESIN  
 (RESIN OR RESINS)  
 L2 0 POLYSACCHARIDE (P) RESIN

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=> s polysaccharide (P) resin  
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 10 POLYSACCARIDES  
 19 POLYSACCHARIDE  
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 524474 RESIN  
 356724 RESINS  
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 (RESIN OR RESINS)  
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 356724 RESINS  
 646434 RESIN  
 (RESIN OR RESINS)  
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 62370 POLYSACCHARIDES  
 79139 POLYSACCHARIDE  
 (POLYSACCHARIDE OR POLYSACCHARIDES)  
 L2 1012 RESIN (P) POLYSACCHARIDE

=> s 12 and coal  
 205824 COAL  
 35049 COALS  
 207632 COAL  
 (COAL OR COALS)  
 L3 10 L2 AND COAL

h eb c g cg b cg

eb

=> d 13 1-10 all

L3 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2003 ACS on STN

Full Text     Citing References

AN 2003:174001 CAPLUS  
 DN 138:224019  
 ED Entered STN: 07 Mar 2003  
 TI Synthetic fuel briquet comprising **coal** dust, water and a reactive organic compound, and a process for making such synthetic fuel  
 IN Cutright, Preston; Gambino, James  
 PA Elementis Specialties, Inc., USA  
 SO U.S. Pat. Appl. Publ., 9 pp.  
 CODEN: USXXCO  
 DT Patent  
 LA English  
 IC ICM C10L001-10  
 ICS C10L005-44; C10L005-12; C10L005-14  
 NCL 044553000; 044560000  
 CC 51-17 (Fossil Fuels, Derivatives, and Related Products)  
 Section cross-reference(s): 60

*Applicant*

FAN.CNT 1	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003041509	A1	20030306	US 2001-935107	20010823
	DE 10230814	A1	20030306	DE 2002-10230814	20020708
	GB 2381003	A1	20030423	GB 2002-16877	20020719
PRAI	US 2001-935107	A	20010823		

AB The present invention discloses a compacted synthetic fuel briquet made of at least 90% **coal** dust, water and a polymeric binder reactive with the **coal** dust to form a chem. bond with the **coal** dust and provides a product very similar to **coal**. The product surprisingly in some cases provides higher BTU value than **coal** alone (up to 5 to 1000 BTU per ton more than counterpart **coal**), does not produce the waste inorg. ash at the users' facility of (or many org. chems. such as tar) and can reduce the moisture of **coal** dust and give increased green strength.

ST fuel briquet **coal** dust water reactive polymer binder

IT IR spectroscopy

(Fourier-transform, of **coal** dust and briquets; synthetic fuel comprising **coal** dust, water and reactive polymer binder, and process for making such synthetic fuel briquet)

IT Anthracite

RL: TEM (Technical or engineered material use); USES (Uses)  
 (dust; synthetic fuel comprising **coal** dust, water and reactive polymer binder, and process for making such synthetic fuel briquet)

IT Strength

(green strength of briquets; synthetic fuel comprising **coal** dust, water and reactive polymer binder, and process for making such synthetic fuel briquet)

IT Compaction

(into briquets; synthetic fuel comprising **coal** dust, water and reactive polymer binder, and process for making such synthetic fuel briquet)

IT Chemisorption

(of polymer binders onto **coal** dust; synthetic fuel comprising **coal** dust, water and reactive polymer binder, and process for making such synthetic fuel briquet)

IT Functional groups

(oxygen-contg. groups, large increases from including additive; synthetic fuel comprising **coal** dust, water and reactive polymer binder, and process for making such synthetic fuel briquet)

IT Binders

h eb c g cg b cg

eb

Fuel briquets  
 (synthetic fuel comprising **coal** dust, water and reactive polymer binder, and process for making such synthetic fuel briquet)

IT Polysaccharides, uses  
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
 (synthetic fuel comprising **coal** dust, water and reactive polymer binder, and process for making such synthetic fuel briquet)

IT Coal dust  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (synthetic fuel comprising **coal** dust, water and reactive polymer binder, and process for making such synthetic fuel briquet)

IT Fuels  
 (synthetic; synthetic fuel comprising **coal** dust, water and reactive polymer binder, and process for making such synthetic fuel briquet)

IT 500881-66-3, JA 250  
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
 (**polysaccharide resin**; synthetic fuel comprising **coal** dust, water and reactive polymer binder, and process for making such synthetic fuel briquet)

IT 500886-05-5, ECOplus  
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
 (starch-based resin; synthetic fuel comprising **coal** dust, water and reactive polymer binder, and process for making such synthetic fuel briquet)

IT 79-06-1D, Acrylamide, copolymers contg. 79-10-7D, Acrylic acid, sodium salt, copolymers contg. 7732-18-5, Water, uses 9005-25-8D, Starch, functionalized derivs. 25085-02-3, Sodium acrylate-acrylamide copolymer 58916-80-6, Magnafloc 155 105864-14-0, JK 270 180984-23-0, JA 250-3  
202289-66-5, ECO **polysaccharide resin**  
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
 (synthetic fuel comprising **coal** dust, water and reactive polymer binder, and process for making such synthetic fuel briquet)

L3 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2003 ACS on STN

	<input checked="" type="checkbox"/> Full Text	<input type="checkbox"/> Citing References
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AN 2000:511613 CAPLUS  
 DN 133:210155  
 ED Entered STN: 28 Jul 2000  
 TI Recovery of boron and rare metals from sea water by chemically-modified novel chitosan resins  
 AU Kondo, K.; Matsumoto, M.  
 CS Department of Chemical Engineering and Materials Science, Doshisha University, Kyoto, 610-0321, Japan  
 SO World Salt Symposium, 8th, The Hague, Netherlands, May 7-11, 2000 (2000), Volume 2, 1205-1206. Editor(s): Geertman, Rob M. Publisher: Elsevier Science B.V., Amsterdam, Neth.  
 CODEN: 69AELQ  
 DT Conference  
 LA English  
 CC 49-1 (Industrial Inorganic Chemicals)  
 Section cross-reference(s): 38, 54, 61  
 AB The adsorption characteristics of B on chitosan resins are qual. investigated for the removal of B from a B mine and the desulfurizing equipment in **coal**-fired steam power stations. We prep'd. a novel chitosan-supported sulfonic acid resin modified by propane sultone and the adsorption of metal ions is examd. by using both the crosslinked chitosan-supported sulfonic acid resin and a crosslinked chitosan resin.  
 ST boron recovery seawater chitosan resin; rare metal recovery seawater

IT chitosan resin  
**Polysaccharides, uses**  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (chitosan modified by; recovery of boron and rare metals from sea water  
 by chem.-modified novel chitosan resins)

IT Adsorption  
 Cation exchangers  
 Seawater  
 (recovery of boron and rare metals from sea water by chem.-modified  
 novel chitosan resins)

IT 7440-42-8P, Boron, preparation  
 RL: PUR (Purification or recovery); PREP (Preparation)  
 (recovery of boron and rare metals from sea water by chem.-modified  
 novel chitosan resins)

IT 9012-76-4, Chitosan  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (recovery of boron and rare metals from sea water by chem.-modified  
 novel chitosan resins)

RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD

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  - (11) Okay, O; Water Res 1985, V19, P857 CAPLUS
  - (12) Wolfrom, M; J Am Chem Soc 1959, V81, P1764 CAPLUS

L3 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2003 ACS on STN

Full Text     Citation References

AN 1999:273144 CAPLUS  
 DN 130:326824  
 ED Entered STN: 04 May 1999  
 TI Adsorption mechanism of boric acid on saccharide-modified chitosan resin  
 AU Matsumoto, Michiaki; Matsui, Tomotsugu; Kondo, Kazuo  
 CS Department of Chemical Engineering and Materials Science, Doshisha  
 University, Kyotanabe, 610-0321, Japan  
 SO Journal of Chemical Engineering of Japan (1999), 32(2), 190-196  
 CODEN: JCEJAQ; ISSN: 0021-9592  
 PB Society of Chemical Engineers, Japan  
 DT Journal  
 LA English  
 CC 49-3 (Industrial Inorganic Chemicals)  
 AB An environmentally-friendly resin for boron recovery is developed. The adsorption characteristics of boron on chitosan resins chem. modified by saccharides are investigated for the purpose of the removal of boron from a boron mine and the desulfurizing equipment in coal-fired steam power stations, and compared with those of a com. resin (Duolite ES371). First, chitosan derivs. incorporating saccharides were synthesized by reductive N-alkylation, and the products were crosslinked with ethylene glycol diglycidyl ether. The resulting products (SMC resins) were found to exhibit solv. in acidic and basic solns. From the adsorption expt. on the resins (SMC and Duolite resins), it is found that the adsorption mechanism is a complex formation between boron which exists as boric acid or borate in an aq. soln. and the vicinal diol groups of the branched saccharide. The apparent adsorption equil. consts. of boric acid-diol complex and borate-diol salt complex are detd. The adsorption isotherms of boron

correlate well with the Langmuir equation, and the order of the satd. adsorption capacity of boron on SMC resins corresponds to that of the degree of substitution on SMC resins.

ST boric acid recovery chitosan resin adsorption; saccharide modification chitosan resin boron adsorption

IT Wastewater treatment  
(adsorption; adsorption mechanism of boric acid on saccharide-modified chitosan resin)

IT Polymers, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
RL: NUU (Other use, unclassified) ; PRP (Properties); USES (Uses)  
(chitosan modified by; adsorption mechanism of boric acid on saccharide-modified chitosan resin)

IT 9012-76-4, Chitosan  
RL: NUU (Other use, unclassified); USES (Uses)  
(adsorption mechanism of boric acid on saccharide-modified chitosan resin)

IT 7440-42-8P, Boron, preparation 10043-35-3P, Boric acid, preparation  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PUR (Purification or recovery); PREP (Preparation); PROC (Process)  
(adsorption mechanism of boric acid on saccharide-modified chitosan resin)

IT 50-99-7, Glucose, properties 58-86-6, Xylose, properties 59-23-4,  
Galactose, properties 147-81-9, Arabinose 3458-28-4, Mannose  
RL: NUU (Other use, unclassified); PRP (Properties); USES (Uses)  
(chitosan modified by; adsorption mechanism of boric acid on saccharide-modified chitosan resin)

IT 110119-83-0, Duolite ES371  
RL: NUU (Other use, unclassified); PRP (Properties); USES (Uses)  
(glucamine resin; adsorption mechanism of boric acid on saccharide-modified chitosan resin)

RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD

- RE
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  - (2) Hano, T; Solv Extr Res Dev, Japan 1994, V1, P146 CAPLUS
  - (3) Inukai, Y; Advances in Chitin Science 1998, V2, P513
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  - (7) Maeda, H; Separ Sci Technol 1995, V30, P3545 CAPLUS
  - (8) Matsumoto, M; J Chem Eng Japan 1998, V31, P853 CAPLUS
  - (9) Matsumoto, M; Separ Sci Technol 1997, V32, P983 CAPLUS
  - (10) Matsumoto, M; Value Adding through Solvent Extraction 1996, P893 CAPLUS
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  - (13) Rorrer, G; Ind Eng Chem Res 1993, V32, P2170 CAPLUS
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L3 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2003 ACS on STN

Full Text	Citing References
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AN 1998:780978 CAPLUS  
 DN 130:68874  
 ED Entered STN: 14 Dec 1998  
 TI Effect of polymeric additives to coal tar pitch on carbonization behavior and optical texture of resultant cokes  
 AU Brzozowska, Tatiana; Zielinski, Janusz; Machnikowski, Jacek

CS Institute of Chemistry in Plock, Warsaw University of Technology, Plock,  
 09-400, Pol.  
 SO Journal of Analytical and Applied Pyrolysis (1998), 48(1), 45-58  
 CODEN: JAAPDD; ISSN: 0165-2370  
 PB Elsevier Science B.V.  
 DT Journal  
 LA English  
 CC 51-19 (Fossil Fuels, Derivatives, and Related Products)  
 Section cross-reference(s): 38  
 AB Homogeneous compns. of coal tar pitch with 10% addn. of various polymers  
 were prep'd. under relatively mild conditions. The effect of a polymer on  
 properties of compn. and yield and optical texture of resultant semi-coke  
 was assessed. There was no correlation between softening point or toluene  
 insol. content and carbonization yield. The addn. of cumarone-indene  
 resin, polystyrene, poly(ethylene terephthalate), polypropylene and  
 polysaccharide resulted in an increase in carbonization yield by 5-3%.  
 Pitch-polymer compns. gave semicoke of less homogeneous optical texture  
 compared to parent coal tar pitch coke. Poly(vinyl chloride) was the  
 only polymer which clearly improved the development of anisotropy on  
 carbonization. The addn. of polypropylene, polysaccharide and  
 butadiene-styrene copolymer contributed to the deterioration of the  
 optical texture.  
 ST coal tar pitch carbonization polymer additives coke quality  
 IT Carbonization  
     Coal tar pitch  
         (effect of polymeric additives to coal tar pitch on  
             carbonization behavior and optical texture of resultant cokes)  
 IT Coumarone-indene resins  
 Polyester, uses  
 Polymers, uses  
 Polysaccharides, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
     (effect of polymeric additives to coal tar pitch on  
         carbonization behavior and optical texture of resultant cokes)  
 IT Coke  
 RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)  
     (effect of polymeric additives to coal tar pitch  
         quality of,; effect of polymeric additives to coal tar pitch  
         on carbonization behavior and optical texture of resultant cokes)  
 IT 9002-86-2, Poly(vinyl chloride) 9003-07-0, Polypropylene 9003-53-6,  
 Polystyrene 9003-55-8, Butadiene-styrene copolymer 25038-59-9,  
 Poly(ethylene terephthalate), uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
     (effect of polymeric additives to coal tar pitch on  
         carbonization behavior and optical texture of resultant cokes)  
 RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 RE

- (1) Anon; PL 141756 1986 CAPLUS
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- (3) Brooks, J; Chemistry and Physics of Carbon 1968, V4, P243 CAPLUS
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- (5) Collin, G; Coal Science and Technology V24
- (6) Collin, G; Fuel Process Technol 1997, V50, P179 CAPLUS
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- (8) Eser, S; Carbon 1989, V27, P877 CAPLUS
- (9) Honda, H; Carbon 1988, V26, P139 CAPLUS
- (10) Kabudzinska, A; Chem Anal (Warsaw) 1996, V41, P459
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 (24) Skoczkowski, K; Technologia produkcji wyrobów węglowo-grafitowych 1995  
 (25) Stadelhofer, J; Fuel 1981, V60, P877 CAPLUS  
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 (29) Zielinski, J; Chemik 1994, V46, P188  
 (30) Zielinski, J; Fuel 1996, V75, P1543 CAPLUS  
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L3 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2003 ACS on STN

	Full Text	Citing References
AN	1981:86836 CAPLUS	
DN	94:86836	
ED	Entered STN: 12 May 1984	
TI	Gel filtration and structural characteristics of fulvic acids extracted from weathered coals	
AU	Chen, Rong-Feng; Wang, Tian-Li; Lin, Su-Feng; Wang, Shuan-Zhu	
CS	Honan Chem. Inst., Peop. Rep. China	
SO	Huaxue Tongbao (1980), (6), 343-5	
	CODEN: HHTPAU; ISSN: 0441-3776	
DT	Journal	
LA	Chinese	
CC	51-16 (Fossil Fuels, Derivatives, and Related Products) Section cross-reference(s): 73	
AB	Fulvic acids were extd. from weathered coals by ion exchange with a strongly acidic resin and sepd. by flocculation with a polysaccharide and filtration. The sepd. substances were concd. by desalting for IR anal. Structural characteristics of 4 types of fulvic acids are graphically presented.	
ST	fulvic acid structure IR; coal fulvic acid structure	
IT	Coal	
	RL: USES (Uses) (fulvic acids sepd. from weathered, structure of)	
IT	Fulvic acids	
	RL: PRP (Properties) (structure of, from weathered coals)	
IT	Molecular structure-property relationship	
	(IR spectra, of fulvic acids from weathered coals)	

L3 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2003 ACS on STN

	Full Text	Citing References
AN	1971:124141 CAPLUS	
DN	74:124141	
ED	Entered STN: 12 May 1984	
TI	Specific and nonspecific substances in an ordinary chernozem fulvic acid filtrate	
AU	Dragunov, S. S.; Murzakov, B. G.; Gostenkov, V. F.	
CS	Inst. Mikrobiol., Moscow, USSR	
SO	Pochvovedenie (1971), (2), 33-40	
	CODEN: PVDEAZ; ISSN: 0032-180X	
DT	Journal	
LA	Russian	
CC	20 (Fertilizers, Soils, and Plant Nutrition)	
AB	A fulvic acid filtrate was blown through a column contg. activated charcoal and the adsorbed substances were fractionated. The following fractions were obtained: NH4 (A), EtOH (1), EtOH-C6H6 (2), Me2CO (3), aq.	

(4), Me<sub>2</sub>CO-aq. (5), NH<sub>4</sub> (6). Fractionation of A on activated **coal** produced the following addnl. fractions: EtOH (7), Me<sub>2</sub>CO (8), aq. (9), Me<sub>2</sub>CO-aq. (10), and NH<sub>4</sub> (B); the latter was sepd. on Al<sub>2</sub>O<sub>3</sub> into a nonadsorbed fraction (11), fraction eluted with 2% NH<sub>4</sub>OH (12), and a fraction desorbed with H<sub>2</sub>SO<sub>4</sub> (13). The fractions were chromatographed using gas-liq. chromatog. The C/H, H/C, C/O, and O/H ratios, the org. acids, and other substances were detd. Fraction 1 was a resinous substance with many aromatic structures, the pyrolysis product of which contained large amts. of PhOH and pyrocatechol. Fractions 7 and 8 were similar to fraction 1 but had a more acid nature and **resin acids** as their dominant constituents. Fractions 4 and 9 contained several **polysaccharides**, were white powders, easily sol. in H<sub>2</sub>O. Fraction 11 contained a considerable concn. of COOH groups; fractions 6, 12, and 13 contained H<sub>2</sub>O-sol. org. substances. It is believed that the variability of soil humic fractions is responsible for the properties of soil org. substances and for the compn. of the soil microflora.

ST chernozem soil fulvate; soil org matter fulvate fraction; chromatog fulvate fraction soil

IT Soils  
(chernozem, fulvic acids in, compn. of)

IT Fulvic acids  
RL: BIOL (Biological study)  
(fractionation of, chernozem soils)

L3 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2003 ACS on STN

Full  Citing  
 Text  References

AN 1967:30269 CAPLUS  
DN 66:30269  
ED Entered STN: 12 May 1984  
TI Polysaccharide-resin coagulants for aqueous suspensions  
IN Watanabe, Hiroshi; Matsunaga, Hideo; Inoue, Masao  
PA Toyo Koatsu Industries, Inc.  
SO U.S., 4 pp.  
CODEN: USXXAM  
DT Patent  
LA English  
NCL 210052000  
CC 46 (Surface Active Agents and Detergents)

FAN.CNT 1  
PATENT NO. KIND DATE APPLICATION NO. DATE  
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PI US 3285849 19661115 US 19620810

AB An aq. soln. of an inorg. salt, such as NaCl, Al<sub>2</sub>(SO<sub>4</sub>)<sub>3</sub>, FeCl<sub>3</sub>, Fe<sub>2</sub>O<sub>3</sub>, or BaCl<sub>2</sub>.H<sub>2</sub>O, and a reaction product of an urea resin, such as an urea-HCHO resin (I) or urea-melamine-HCHO resin, and an modified oxidized starch the OH group of which is replaced by an OCH<sub>2</sub>CH<sub>2</sub>OH, OCH<sub>2</sub>CH<sub>2</sub>CN, OCH<sub>2</sub>CH<sub>2</sub>CONH<sub>2</sub>, or OCH<sub>2</sub>-CH<sub>2</sub>CO<sub>2</sub>R (R = alkyl) group is a better coagulant than an inorg. salt and the resin product alone for aq. **coal** dust suspensions, aq. S suspensions, or industrial waste water. Thus, 9 parts partly (73.9%) hydroxyethylated oxidized starch and 1 part 40% aq. cationic I were dissolved in H<sub>2</sub>O to give a 25% soln. The pH of the soln, was adjusted to 5 and the mixt. was heated at 60° for 45 min. The product had a viscosity of 5 poises and the soln. was dild. to a solids content of 0.01%. A 7% aq. coaldust suspension was tested with NaCl and Al<sub>2</sub>(SO<sub>4</sub>)<sub>3</sub> alone, the polymer soln., and the mixt. of polymer soln. and inorg. salt. Use of a mixt. of 1-4% NaCl or Al<sub>2</sub>(SO<sub>4</sub>)<sub>3</sub> and 5-10 ppm. of the polymer product gave a clear, transparent supernatant with comparable sedimentation velocity to that obtained with the polymer product alone. The inorg. salt alone had no effect on the suspension.

ST COAGULANTS AQ SUSPENSIONS; UREA RESIN-STARCH COAGULANTS; SUSPENSIONS AQ COAGULANTS; MELAMINE RESIN-STARCH COAGULANTS; RESIN POLYSACCHARIDE COAGULANTS; POLYSACCHARIDE-RESIN COAGULANTS; COAL DUST SUSPENSION COAGULANTS; SULFUR SUSPENSION COAGULANTS; WASTE WATER COAGULANTS;

IT STARCH-RESIN COAGULANTS

IT Coagulation  
(agents for, inorg. salt-melamine (or urea) condensation  
product-oxidized starch as, for aq. suspensions)

IT Coal  
RL: USES (Uses)  
(dust, coagulation and sedimentation of aq. suspensions of)

IT Sedimentation  
(in suspensions (aq.) by inorg. salt-melamine (or urea) condensation  
product-oxidized starch)

IT Starch, hydroxyethyl oxidized  
RL: USES (Uses)  
(coagulants from inorg. salt, melamine (or urea) condensation products  
in, for aq. suspensions)

IT Urea condensation products, coagulants from inorg. salts, uses and  
miscellaneous  
RL: USES (Uses)  
(oxidized starch and, for aq. suspensions)

IT p-Dioxane, mercury complexes  
RL: USES (Uses)  
(spectrum (ir) of, for)

IT 9003-08-1 25036-13-9, uses and miscellaneous  
RL: USES (Uses)  
(coagulants from inorg. salts, oxidized starch and, for aq.  
suspensions)

IT 7647-14-5, uses and miscellaneous 7705-08-0, uses and miscellaneous  
10043-01-3 10361-37-2, uses and miscellaneous  
RL: USES (Uses)  
(coagulants from melamine (or urea) condensation products, oxidized  
starch and)

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Full  Citing  
 Text  References

AN 1963:14101 CAPLUS  
 DN 58:14101  
 OREF 58:2296d-e  
 ED Entered STN: 22 Apr 2001  
 TI Gravimetric investigations of the decomposition behavior of low-rank fuels  
 AU Abel, Otto; Luther, Horst  
 CS Bergakad., Clausthal/Harz, Germany  
 SO Erdoel und Kohle (1962), 15(2), 90-5  
 CODEN: ERKOAJ; ISSN: 0367-1305  
 DT Journal  
 LA Unavailable  
 CC 26 (Coal and Coal Derivatives)  
 AB By thermogravimetric investigations of sugars, **polysaccharides**,  
 celluloses, lignins, humic acids, and bitumens of peats and brown **coals**,  
 correlations were made of the max. of the degasification ranges of these  
 substances with the decompr. peaks of the following classes of compds.:  
 200°, 210°, and 225° sugars; 240°  
**polysaccharides** and tannins; 260° hemieelluloses,  
**polysaccharides**, and **resins**; 280° hemicelluloses; 295°  
 celluloses; 320° lignins; 335° and 350° lignins,  
 humic acids, humins, and bitumens; 375° humic acids, humins,  
 bitumens, and lignins; 395°, 405°, and 425° bitumens  
 and humins.  
 IT Radioelements  
 (absorption of, by **coal**)  
 IT **Coal**, brown and(or) Lignitous **coal**  
 (bitumen of, thermal decompr. of)  
 IT Peat  
 (bitumens of, thermal decompr. of)  
 IT Bitumens

Humins  
 Resins  
 (decompn. by heat)  
 IT Humic acids  
 Sugars  
 Tannins  
 (decompn. of, by heat)  
 IT Polysaccharides  
 (decompn., by heat)  
 IT 9004-34-6, Cellulose 9005-53-2, Lignin 9034-32-6, Hemicellulose  
 (decompn., by heat)

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Full	Citing
Text	References

AN 1959:69586 CAPLUS  
 DN 53:69586  
 OREF 53:12633a-b  
 ED Entered STN: 22 Apr 2001  
 TI Improvement of the clarification of wash water by the addition of flocculating agents  
 AU v. Pelser-Berensberg, B.; Schuster, A.; Thone, L.  
 SO Aachener Bl. Aufbereiten-Verkoken-Brikett. (1956), 6, 65-88  
 From: Fuel Abstr. 20, Abstr. No. 3606(1956)  
 DT Journal  
 LA Unavailable  
 CC 21 (Fuels and Coal Products)  
 AB Expts. were made on the use of materials such as **polysaccharides** and **resins** in the presence of electrolytes, for clarification of wash water for **coal** prepns.  
 IT Coal  
 (cleaning or washing of, of Bureinskii)  
 IT Coal  
 (cleaning or washing of, water treatment for)  
 IT 7732-18-5, Water  
 (purification or conditioning of, coagulation, for **coal** washing)

L3 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2003 ACS on STN

Full	Citing
Text	References

AN 1924:6154 CAPLUS  
 DN 18:6154  
 OREF 18:849h-i  
 ED Entered STN: 16 Dec 2001  
 TI Chemistry of Japanese plants. II. Composition of fossil wood  
 AU Komatsu, Shigeru; Ueda, Hidenosuke  
 SO Mem. Col. Sci. Kyoto. Imp. Univ. (1923), 7A, 7-13  
 DT Journal  
 LA Unavailable  
 CC 11D (Biological Chemistry: Botany)  
 AB The investigation was undertaken to throw light on the mechanism of **coal** formation. The fossil wood, umoregi (A), [which is apparently brown lignite rather than fossil wood--Abstractor] presumably belongs to a species of Sequoia; hence the analyses of A were compared with analytical data obtained in the case of redwood (*Sequoia sempervirens*). A contained 1.03% ash, approx. 6% **resin**, 1.8% methyl-pentosans, 5.1% **polysaccharides** other than cellulose, 56.2% lignin, 29.4% cellulose. Apparently pentosans were absent. Ultimate analysis showed C 61, H 6.0, S 0.8 and ash 2.8%. The **resin** contained 73.8% C and 6.65% H. It is evident that in the process of change from wood to "umoregi" 20% of cellulose and 4% of other **polysaccharides** are destroyed and the lignin content is increased by about 25%. Approx. 2% **resin** is accumulated during the change.